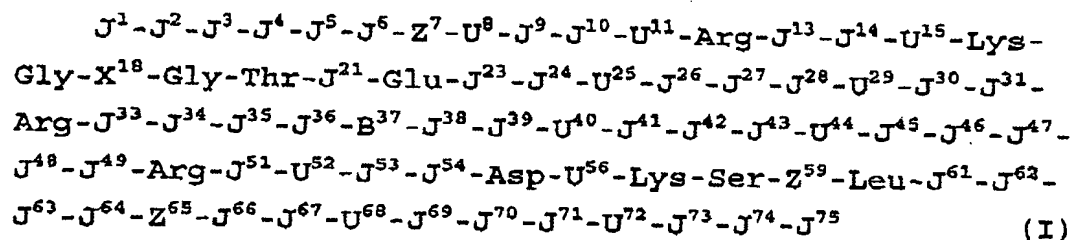## ABSTRACT

The present invention relates to a peptide labelled with fluorine-18 for the specific recognition of lipid vectors. The peptide of the invention comprises the following peptide sequence (PI):

$$J^1-J^2-J^3-J^4-J^5-J^6-Z^7-U^8-J^9-J^{10}-U^{11}-Arg-J^{13}-J^{14}-U^{15}-Lys-$$
$$Gly-X^{18}-Gly-Thr-J^{21}-Glu-J^{23}-J^{24}-U^{25}-J^{26}-J^{27}-J^{28}-U^{29}-J^{30}-J^{31}-$$
$$Arg-J^{33}-J^{34}-J^{35}-J^{36}-B^{37}-J^{38}-J^{39}-U^{40}-J^{41}-J^{42}-J^{43}-U^{44}-J^{45}-J^{46}-J^{47}-$$
$$J^{48}-J^{49}-Arg-J^{51}-U^{52}-J^{53}-J^{54}-Asp-U^{56}-Lys-Ser-Z^{59}-Leu-J^{61}-J^{63}-$$
$$J^{63}-J^{64}-Z^{65}-J^{66}-J^{67}-U^{68}-J^{69}-J^{70}-J^{71}-U^{72}-J^{73}-J^{74}-J^{75} \qquad (I)$$

in which the amino acids J are chosen independently of each other from natural amino acids, or derivatives thereof, in such a manner that at least 50% of them are polar residues chosen from Arg, Asn, Asp, Cys, Gln, Glu, Gly, His, Lys, Orn, Pro, Ser, Thr and Tyr, the amino acids U are chosen from Ala, Cys, Gly, Ile, Leu, Met, Phe, Trp, Tyr and Val, the amino acid X^{18} is chosen independently of the other amino acids of the sequence from Ala, Asn, Cys, Gln, Gly, His, Ile, Leu, Met, Phe, Ser, Thr, Trp, Tyr and Val, the amino acid B^{37} is chosen independently of the other amino acids of the sequence from Arg, Ala, Cys, Gly, Ile, Leu, Met, Phe, Trp, Tyr and Val, the amino acid Z^7 is chosen independently of the other amino acids from Asp and Glu, the amino acids Z^{59} and Z^{65} are chosen independently from Glu, Asp, Lys and Arg, the superscripts of the residues J, Z, U, X and B representing the positions of these amino acids in the said sequence.